

Express Mail No.: EL 452 481 944 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Paul H. Moose

Serial No.: 09/955,912 Group Art Unit: 2681

Filed: September 18, 2001 Examiner: To be Assigned

For: SYNCHRONIZATION, CHANNEL Attorney Docket No.: 10764-003-999

ESTIMATION AND PILOT TONE

TRACKING SYSTEM

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

- 1. Enclosures accompanying this Information Disclosure Statement are:
 - 1a. A list of all patents, publications, applications, or other information submitted for consideration by the office.
 - 1b. A legible copy of:
 - Each U.S. patent application publication and U.S. and foreign patent;
 - Each publication or that portion which caused it to be listed on the PTO-1449;
 - □ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - all other information or portion which caused it to be listed on the PTO-1449.
 - 1c.

 An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - ld.

 Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
- 2.

 This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):

- Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
- □ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
- Before the mailing of the first Office action on the merits;
- □ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
- 3. □ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. □ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b.
 The \$180.00 fee set forth in 37 C.F.R. \$1.17(p) in accordance with 37 C.F.R. \$1.97(c) is:
 - □ enclosed
 - □ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

(Item 3b to be checked if any reference known for more than 3 months)

4.

This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:

- □ enclosed.
- □ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

The Certification Statement in Item 5 below is applicable.

5. \square Certification Statement (applicable if Item 3a or Item 4 is checked)

(Check either Item 5a or 5b)

- 5a.

 In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was known by any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
- 6. This application is a continuation application under 37 C.F.R. §1.60 or §1.53(b) or (d).



· 7.

		MIS.	(Check appropriate Items 6a, 6b and/or 6c)	
	6a.	0	A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently herewith.	filed
	6b.	0	Copies of publications listed on Form PTO-1449 from prior application Serial N, filed on, of which this application claims priority under 35 U.S.C. §120, are being submitted pursuant to 37 C.F.R. §1.98(d).	
	6c.	0	Copies of the publications listed on Form PTO-1449 were not previously cited i prior application Serial No. , filed on , and are provided herewith.	n
7.	0	This is	a Supplemental Information Disclosure Statement. (Check either Item 7a or 7b)	
	7a.	0	This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on A bona fide atte was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on	
	7b.		This Supplemental Information Disclosure Statement is timely filed within one month of a PTO Notice under 37 C.F.R. §1.97(i).	(1)
8.			rdance with 37 C.F.R. §1.98, a concise explanation of what is presently understoelevance of each non-English language publication is:	od to
			(Check Item 8a, 8b, or 8c)	
	8a.		satisfied because all non-English language publications were cited on the enclose English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found the foreign office.	ort
	8b.		set forth in the application.	
	8c.		enclosed as an attachment hereto.	
9.	⊠	overpa	mmissioner is authorized to charge any additional fee required or credit any ment for this Information Disclosure Statement and/or Petition to Pennie & Edmeposit Account No. 16-1150.	onds
10.	⊠	materia report o	nission is made that the information cited in this Statement is, or is considered to I to patentability nor a representation that a search has been made (other than a so of a foreign counterpart application or PCT International Search Report if submitted h). 37 C.F.R. §§1.97(g) and (h).	earch
Date	e	Dece		<u>1,615</u> . No.)

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LIST OF REFERENCES CITED BY AND LICANT

(Use several sheets if necessary)

EXAMINER

ATTY, DOCKET NO.	APPLICATION NO.					
10764-003-999	09/955,912					
APPLICANT	 					
Paul H. Moose						
FILING DATE	GROUP					
Sentember 18, 2001	2681					

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					September 18, 2001		2681			
			Ų.	S. PATENT DOCUM	ENTS					
EXAMINER INITIAL		DOCUMENT NUMBÉR	DATE		NAME	CLASS	SUBCLASS	FILING IF APPR	G DATE	
	AA	5,345,440	09/06/94_	Gledhill, et al.	<u> </u>					
	АВ	5,450,456	09/12/95	Mueller				<u> </u>		
	AC	5,732,113	03/24/98	Schmidl, et al.						
	AD	5,802,117	09/01/98	Ghosh	- 8					
	AE	5,914,931	06/22/99	Kang, et al.						
	AF	6,035,003	03/07/00	Park, et al.						
	AG	6,122,246	09/19/00	Marchok, et al.						
	АН	6,125,124	09/26/00	Junell, et al.	<u></u>					
	Al	6,172,993	01/09/01	Kim, et al.					-	
	AJ	6,198,782	03/06/01	De Courville, et	al.					
	AK	6,219,333	04/17/01	Ahn						
			FORE	EIGN PATENT DOC	UMENTS					
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	In ho Hwang, Hwang Soo Lee, and Keon woo Kang, "Frequency and Timing Period Offset Estimation AL Tochnique for OEDM Systems." Flectronics Letters, Vol. 34, No. 6, pp. 530-21 (March 19, 1998)									
Technique for OFDM Systems," <i>Electronics Letters</i> , Vol. 34, No. 6, pp. 520-21 (March 19, 1998).										
Paul H. Moose, "A Technique for Ortohogonal Frequency Division Multiplexing Frequency Correction," <i>IEEE Trans. on Comm.</i> , Vol. 42, No. 10, pp. 2908-14 (October 1994).							icy Onset			
	Timothy M. Schmidl and Donald C. Cox, "Robust Frequency and Timing Synchronization for OF								FFF	
AI		Trans. on Comm., Vol. 45, No. 12, pp. 1613-21 (December 1997).								
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DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not

in conformance and not considered. Include copy of this form with next communication to applicant.